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Amendment To The Title:

Please replace the title with the following amended title:

~~AN IMPROVED~~ AIRBAG WITH INTERNAL POSITIONING PANELS FOR
SEQUENTIAL DEPLOYMENT

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Amendment To The Specification:

Please replace paragraph [0001], beginning on page 1, with the following amended paragraph:

[0001] The present invention relates generally to supplemental restraint systems of vehicles, and more particularly to an ~~improved~~ airbag that can be sequentially deployed for minimizing the risk of injury to an occupant's head and neck.

Please replace paragraph [0006], beginning on page 2, with the following amended paragraph:

[0006] Therefore, a need exists for an ~~improved~~ airbag with internal panel structure for sequentially deploying the airbag and decreasing an occupant's risk of injury as he impacts the airbag.

Please replace paragraph [0007], beginning on page 2, with the following amended paragraph:

[0007] The present invention provides an ~~improved~~ airbag with one or more internal positioning panels for sequentially deploying the airbag and minimizing the risk of injury to a vehicle occupant. This ~~improved~~ airbag is an inflatable bag having a primary chamber and a secondary chamber that is adjacent to the primary chamber. The primary chamber is configured for inflating before the secondary chamber. In addition, this primary chamber is utilized for applying a generally downward force to a lower-body portion of the vehicle occupant. In this way, a substantial portion of the initial deployment force of the airbag is allocated to the occupant's more durable lower-body portion. Also, the primary chamber can be utilized for positioning the occupant's body in a manner best suited for impacting the airbag. This airbag is then sequentially deployed in a generally linear direction upward from the primary chamber to the secondary chamber.

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Please replace paragraph [0008], beginning on page 3, with the following amended paragraph:

[0008] One advantage of the present invention is that an ~~improved~~ airbag is provided that controls the kinematics of an occupant's body and the method by which he impacts the airbag so as to decrease his risk of injury.

Please replace paragraph [0009], beginning on page 3, with the following amended paragraph:

[0009] Another advantage of the present invention is that an ~~improved~~ airbag is provided that distributes a greater portion of the airbag's initial deployment force to portions of the occupant's body, which are better suited for withstanding those forces without incurring an injury.

Please replace paragraph [0010], beginning on page 3, with the following amended paragraph:

[0010] Yet another advantage of the present invention is that an ~~improved~~ airbag is provided that furnishes immediate protection for an occupant's head and neck.

Please replace paragraph [0011], beginning on page 3, with the following amended paragraph:

[0011] Still another advantage of the present invention is that an ~~improved~~ airbag is provided that is sequentially deployable for decreasing the impact force between the airbag and the occupant's head and neck.

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Please replace paragraph [0014], beginning on page 3, with the following amended paragraph:

[0014] FIGURE 1A is a perspective view of an ~~improved~~ airbag in a first stage of sequential deployment, according to one embodiment of the present invention;

Please replace paragraph [0015], beginning on page 3, with the following amended paragraph:

[0015] FIGURE 1B is a cross-sectional view of the ~~improved~~ airbag shown in FIGURE 1A;

Please replace paragraph [0016], beginning on page 3, with the following amended paragraph:

[0016] FIGURE 1C is a front view of the ~~improved~~ airbag shown in FIGURE 1A;

Please replace paragraph [0017], beginning on page 4, with the following amended paragraph:

[0017] FIGURE 2A is a perspective view of the ~~improved~~ airbag, shown in FIGURE 1A, illustrating the airbag in a second stage of sequential deployment;

Please replace paragraph [0018], beginning on page 4, with the following amended paragraph:

[0018] FIGURE 2B is a cross-sectional view of the ~~improved~~ airbag shown in FIGURE 2A;

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Please replace paragraph [0019], beginning on page 4, with the following amended paragraph:

[0019] FIGURE 2C is a front view of the ~~improved~~ airbag shown in FIGURE 2A;

Please replace paragraph [0020], beginning on page 4, with the following amended paragraph:

[0020] FIGURE 3A is a perspective view of the ~~improved~~ airbag shown in FIGURE 1A, illustrating the distribution of an initial airbag deployment force to a vehicle occupant's lower-body region during the first stage of sequential deployment, according to one embodiment of the present invention;

Please replace paragraph [0021], beginning on page 4, with the following amended paragraph:

[0021] FIGURE 3B is a perspective view of the ~~improved~~ airbag shown in FIGURE 2A, illustrating the controlled cushioning of the vehicle occupant's head and neck during the second stage of sequential deployment, according to one embodiment of the present invention;

Please replace paragraph [0022], beginning on page 4, with the following amended paragraph:

[0022] FIGURE 4 is an exploded view of a series of panels utilized to form the ~~improved~~ airbag shown in FIGURES 1A-2C;

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Please replace paragraph [0023], beginning on page 4, with the following amended paragraph:

[0023] FIGURE 5A is a cross-sectional view of the ~~improved~~ airbag shown in FIGURE 2B, illustrating an alternative construction of panels of the ~~improved~~ airbag, according to another embodiment of the invention; and

Please replace paragraph [0024], beginning on page 4, with the following amended paragraph:

[0024] FIGURE 5B is an exploded view of a series of panels utilized to form the ~~improved~~ airbag shown in FIGURE 4. ~~[[4B.]]~~

Please replace paragraph [0026], beginning on page 4, with the following amended paragraph:

[0026] The present invention is particularly suited for an ~~improved~~ driver's side airbag for sequential two-stage deployment and minimizing a risk of injury during a front-end crash. In this regard, the embodiments described herein employ structural features where the context permits. However, it is understood that a variety of other embodiments without the described features are contemplated as well. For example, the ~~improved~~ airbag can be utilized for protecting various vehicle occupants besides the driver and in a variety of collisions, instead of front-end crashes. For this reason, it follows that the invention can be carried out in various other modes and utilized for other suitable applications as desired.

Please replace paragraph [0027], beginning on page 5, with the following amended paragraph:

[0027] Referring to Figures 1A and 2A, there are shown perspective views of an ~~improved~~ airbag 10, respectively illustrating the ~~improved~~ airbag 10 in a first stage of sequential

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deployment and a second stage of sequential deployment, according to one embodiment of the invention.

Please replace paragraph [0028], beginning on page 5, with the following amended paragraph:

[0028] With particular attention to Figures 3A-3B, it will be appreciated that the improved airbag 10 can minimize the risk of injury to a vehicle occupant 12, e.g. a driver, during a front-end collision. As shown in Figure 3A, the first stage of deployment can cause the airbag 10 to apply a substantial portion of the "punch out" force to the driver's lap 14 and lower abdomen 16. As is known, this "punch out" force or initial deployment force typically is powerful because it must be sufficiently strong for breaking the airbag 10 out of its steering-wheel housing 18 within a short period of time. This feature is beneficial because it can direct this typically strong deployment force to a portion of the occupant's body, which is sufficiently durable for withstanding such a force. Specifically, it is understood that a person's lap 14 and lower abdomen 16 usually are better suited for withstanding a substantial blow than the person's head 20 and neck 22.

Please replace paragraph [0029], beginning on page 5, with the following amended paragraph:

[0029] During the first stage of sequential deployment, the improved airbag 10 also controls the kinematics of the vehicle occupant 12 for preparing him to impact the remainder of the airbag 10 during the second stage of deployment. For example, as seen in Figure 3A, during the first stage of deployment, the improved airbag 10 can contact the occupant's lower body and move the occupant's body in a manner that causes him to tuck in his chin 26. Thereafter, during the second stage of deployment as shown in Figure 3B, the remainder of the airbag 10 can inflate in a controlled and timely manner such that the occupant 12 impacts the remainder of the airbag 10 with his chin tucked in. This positioning of the occupant's body can prevent the inflating airbag 10 from contacting the occupant underneath his chin 26 and

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forcing his head 20 upward and rearward. It will be understood that this feature prevents substantial pressure from being applied to the occupant's neck 22, which can result in a serious injury. In addition to this example, it is also contemplated that the sequential deployment of the ~~improved~~ airbag 10 can also position the occupant's body in various other ways for preventing a variety of injuries.

Please replace paragraph [0030], beginning on page 6, with the following amended paragraph:

[0030] Furthermore, in the first stage of deployment, the ~~improved~~ airbag 10 includes a vertical columnar portion for providing immediate protection for the occupant's upper body region, e.g. his head and neck. This vertical columnar portion is defined by an upper sub-chamber 42 of the airbag 10 (as detailed in the description for Figures 1B and 1C).

Please replace paragraph [0031], beginning on page 6, with the following amended paragraph:

[0031] Referring now to Figures 1B, 2B, and 4, it can be seen that the ~~improved~~ airbag 10 is an inflatable bag comprised of three interconnected panels. Specifically, these panels include a first outer panel 28 and a second outer panel 30, which is sized substantially similar to the first outer panel 28. The first and second outer panels 28, 30 are attached to each other at their peripheries via stitching or various other suitable fastening methods. Additionally, the first and second outer panels 28, 30 have an inner panel 32 attached therebetween via stitching or various other suitable fastening methods. This inner panel 32 is utilized for partitioning the interior of the airbag 10 into a primary chamber 34 and a secondary chamber 36 (shown in Figure 2B). The primary chamber 34 is inflated during the first stage of deployment before the secondary chamber 36 is inflated during the second stage of deployment.

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Please replace paragraph [0032], beginning on page 6, with the following amended paragraph:

[0032] However, it will be appreciated that the inflatable bag can instead be comprised of only one panel, two panels, or various other numbers of panels as desired. For example, in another embodiment illustrated in Figures 5A and 5B, the ~~improved~~ airbag is comprised of two panels. These panels include one outer panel 28' and an inner panel 32'.

Please replace paragraph [0034], beginning on page 6, with the following amended paragraph:

[0034] The primary chamber 34 includes an upper sub-chamber 42 and a lower sub-chamber 44, which together extend substantially across a height of the ~~improved~~ airbag 10. As respectively shown in Figures 1B and 1C, the lower sub-chamber 44 extends substantially across a depth and a width of the ~~improved~~ airbag 10. This construction allows the lower sub-chamber 44 to apply a substantial portion of the initial deployment force across the vehicle occupant's lap and lower abdomen.

Please replace paragraph [0039], beginning on page 8, with the following amended paragraph:

[0039] Referring back to Figures 1B and 2B, the secondary inlet 46 is one or more open vent holes formed within the inner panel 32. In this regard, the open vent holes allow for the free flow of gas between the primary chamber 34 and the secondary chamber 36. Also, in this embodiment, one skilled in the art will appreciate that the inner panel 32 itself comprises a baffle vent 33a with the size of the holes regulating the flow of air therethrough. However, it is understood that the baffle vent 33a can have other suitable constructions as desired.

Please delete paragraph [0040] beginning on page 8 and starting with "In another embodiment."

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Please replace paragraph [0041], beginning on page 8, with the following amended paragraph:

[0041] ~~In yet another~~ Also in this embodiment, the secondary inlet 46 is simply a permeable fabric 33b (shown in Figure 1B) comprising the inner panel 32 or a portion thereof. Similar to the baffle vent, this permeable fabric can meter the flow of gas into the secondary chamber 36 and further protect the occupant's head 20 and neck 22.

Please replace paragraph [0042], beginning on page 8, with the following amended paragraph:

[0042] With particular attention to Figure 2B, the ~~improved~~ airbag 10 further includes a fixed tether 50 attached to and in connection between the second outer panel 30 and the inner panel 32. This fixed tether 50 restricts the second outer panel 30 from bulging outward and maintains an overall uniform depth of the airbag 10 when the secondary chamber 36 is inflated in the second stage of deployment. As shown in Figures 2B and 2C, the secondary chamber 36 extends substantially across the width and the depth of the ~~improved~~ airbag 10. For that reason, the controlled deployment of the secondary chamber 36 can cushion the occupant's head 20 and neck 22 and decrease the risk of injury to those body parts.